CLAIMS

1. A method of suppressing narrow-band interference from a wide-band signal, comprising

receiving a signal,

5   performing an orthonormal conversion of the signal into subspace components of a desired subspace,

decoding the converted signal with a decoder, whereby an estimate for the received signal is obtained,

determining an estimate for narrow-band interference properties by

10   subtracting the estimate obtained from an output of the decoder from the received signal before performing the orthonormal conversion, and

reducing effect of the subspace components comprising narrow-band interference signals reduced in the received signal by means of the determined estimate.

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2. A method as claimed in claim 1, the method further comprising the step of suppressing the subspace components that comprise narrow-band interference signals from the received signal.

20   3. A method as claimed in claim 1, the method further comprising the step of excising the subspace components that are stronger than the given threshold from the received signal to a desired level.

4. A method as claimed in claim 1, the method further comprising

25   the step of passing the signal from which interference is suppressed to the decoder again, and performing the interference cancellation operation so many times as desired.

5. A method as claimed in claim 1, the method further comprising

30   the step of passing the signal through the decoder several times before the output value of the decoder is used in the interference cancellation.

6. A receiver comprising

interference cancellation means for suppressing a narrow-band

35   interference signal from a received signal,

conversion means for performing an orthonormal conversion of the signal into subspace components of a desired subspace,

a decoder connected operationally to the output of the interference suppression means, in which decoder an estimate for the received signal is
5   obtained, the output of the decoder being operationally connected to the interference suppression means, wherein

the conversion means are arranged to determine an estimate for narrow-band interference properties, in which determination the estimate obtained from the output of the decoder is subtracted from the received signal
10   before the orthonormal conversion is performed, and

by using the determined estimate, the interference cancellation means are arranged to reduce effect of the subspace components comprising narrow-band interference signals in the received signal.

15   7. A receiver as claimed in claim 6, where in the interference cancellation means are arranged to suppress the subspace components comprising narrow-band interference signals from the received signal.

         8. A receiver as claimed in claim 6, where in the interference
20   cancellation means are arranged to excise the subspace components, which are stronger than the given threshold from the received signal to a desired level.

         9. A receiver as claimed in claim 6, where in the decoder is a turbo-
25   decoder.